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Vermont.

Perkins Joseph

AN ADDRESS

DELIVERED BEFORE

THE MEDICAL SOCIETY,

OF THE

STATE OF VERMONT,

OCTOBER 22, 1856.

BY

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PUBLISHED BY ORDER OF THE SOCIETY.

RUTLAND:
GEORGE A. TUTTLE & CO., PRINTERS.
1857.

ADDRESS.

Gentlemen of the Vermont Medical Society:—It becomes my official duty, on the occasion of this annual meeting, to address you on some subject which may be of interest to us as members of the great fraternity of the healing art.

At the annual meeting of your society, in October, 1854, I was honored by the appointment of chairman of a committee, whose duty it was to memorialize the honorable legislature of the state of Vermont, on the subject of a law, which should require of proper persons or officers, in each town and city in the state, to register the births, marriages and deaths, which may occur within their respective limits; and to make annually returns to the secretary of state: and which should also make it the duty of that officer to present to the state legislature annually, a report embracing all the statistical information contained in the foregoing returns of the several towns. At the meeting of the legislature your committee failed of this duty, for the reason that they were not informed of their appointment, it having been made in their absence from the meeting. Yet it is known to some of your body, that by the agency of individuals of the committee, and members of our profession in the legislature, a bill embracing the objects already stated, was originated in the senate but failed of enactment in each branch of the legislature. And at the last annual meeting of this society your committee were reinvested with the office and duty assigned to them the preceding year.

As a responsible member of that committee, it appeared in my judgment that I could select no subject so fitting my present duty, as the subject of a law of registration for the state of Vermont. It is one which, in order to the appreciation which is due to it, must be understood both in its nature and results; and which I shall not attempt to express or advocate, by declamatory or oratorical pursuasion, but simply such *facts* and reasons as may be drawn from the history of registration, and its statistical reports, which are already before the public,

It must be evident to *ourselves*, that however well this subject may be comprehended and appreciated by the medical profession, it is only through the knowledge and will of the people,—the law making power of the state,—we can hope to attain the object of our desire, however intelligently or devoutly wished for. Therefore we can hardly doubt the duty or the utility of discussing the subject in professional circles, and urging its claims among the mass of the people with whom we daily mingle.

Notwithstanding we have reason to regret the failure of the senate bill of the last session, the committee are neither discouraged nor falter in their purpose. The lapse of time, and the increased diffusion of information of the successful working of registration in other states, have rendered our convictions even more pressing, that a postponement of this public duty must compromise the character of our profession and state. We will not cherish the belief, that the failure of our government to grant the object of our memorial, should be attributed to a disposition to neglect any measure, when obviously so important, as in a sanitary view are the vital statistics of the state, both to our own citizens, and as the quota of our contribution of reciprocal indebtedness to our whole country and the world. We are well aware that many objects constantly claim the attention of the legislature, the necessities and advantages of which are obvious and pressing; and that the object of our solicitude cannot appear to every member of that body, in all the importance of its ultimate consequences, without a considerate examination of its purposes, and the valued results which have been already attained in our sister states and under foreign governments.

As a society—the representatives of our profession, sensible of the responsibilities entrusted to us in that capacity, should we not respectfully present to the honorable bodies of our legislature, such reasons as appear to urge, at their hands, the enactment of a registration law, such as in their wisdom may be devised?

It strikes me as beyond a doubt, that by a fair examination of the premises, the object will appear not only as legitimate to legislation, but also embracing some of the most grave and valued interests committed to the charge of legislators. That it not only looks to the economy of the pecuniary prosperity of a people, but in the revelations of vital statistics, discovers the truth of the maxim, that, "the proper study of mankind is man,"—not merely as a speculative science, but as the means of direct practical improvement of his highest physical interests,—relating to life and health,—and, indirectly, of his *high-*

est interest, his intellectual and moral well being. More than half a century has elapsed since this liberal and philanthropic view was recognized by statesmen of the most cultivated governments in Europe; and it is now fifteen years since the enactment, by the legislature of Massachusetts, of the first statute in our republic, comprehending *all* the essential elements of a registration law.

The history of registration,—of its infancy in America, and more perfect maturity in Europe,—is one of the highest interest, both in point of scientific inquiry and political economy; and, it is from the history of its inception, developments, and results, we derive both the reason and rule for adopting it in our own code, and securing to ourselves its benefits.

It is not the bare *precedent* of legislation, which arrests our attention; but the necessities, the rights, the desires of a people, and the duties and responsive acts of the government. It is in the reflected experience of other people and governments, we perceive our own wants and duties. And it is one of the prominent features of the history of registration, that no people or government which has once adopted the true principles of the scheme, have ever retrograded or abandoned them. The investigations made, the knowlege elicited, and the adaptation of such knowledge to ameliorate the condition of communities and the entire race of man, have given impetus and direction to the philanthropist and statesman; as is manifest in the popular approval, the progressive emendation of the laws, and their extended application, to new objects of science and practical utility. These observations are especially true of the state of Massachusetts, which in this, as in many other measures of intelligent and liberal legislation, affords a precedent worthy of imitation in her sister states. To the legislature of that state will soon be rendered the 15th annual report under the registration law. These reports have annually increased in extent and copiousness of subjects, until they are now expanded from the pamphlet of 40 or 50 pages to a volume of six times that capacity,—a fact in itself significant of the estimate of an enlighted people of the value of vital statistics;—but which is more especially evinced by the intrinsic material of the reports.

These reports exhibit a uniform progress in perfecting the administration of the statute, by the completeness of the statistical returns from the several towns and municipalities, by an additional number and improved arrangement in the tabular returns. And, more recently, by summary tables, condensing from the annual reports on the most important topics, the accumulated facts of many years,—and which embodying numeri-

cally the statistics of nearly one million of people, deriving their nativity from different countries, and presenting many varieties and modes of life,—offer a more reliable basis for truthful deductions in relation to the important interests of humam life, in the New England states, than can be attained by the more labored and less adapted reports of the European states. This appears especially in regard to longevity, as related to different occupations aud conditions of people; and also as relates to the various causes of disease and death. We are from these sources supplied with data of the time present, and our proximate locality, from which to select, (in reference to their healthfulness,) our occupations and pursuits,—for estimating the true risks incurred in the insurance of life;—and especially for studying the *complications* of the *causes* and *forms* of disease.

The plan of registration, as already adopted, notes the three great epochs of each life; the birth, marriage, and death. The first and last, embracing the extremes of individual existence; the second resulting in the connection of families and the common origin of population. In a multitude of questions involving the descent of property, pecuniary claims on individuals or governments, the settlement of paupers, the age of persons, the places of their nativity, the history of individuals and families; the want is apparent and urgent of such an authorized legal record. It is the remark of an eminent English jurist, "That it is as necessary, for the preservation of the rights of individnals, to preserve a registry of births, marriages and deaths, as it is to preserve a registry of deeds." Many instances are known in the history of New England, of great and often fruitless expenditures of money, time and mental labor, in tracing out family relations in our states and our father land, in order to establish a claim to property. And it must be well known to the legal profession, that in the state of Vermont, nothing is so meagre and uncertain as the recorded data necessary for these inquiries; and, until quite recently, nothing in the institutions of enlightened and prosperous America, has so much astonished intelligent Europeans, as this want of any legislative means of tracing out the identity, connexions, and principal events of the personal history of individuals. England has, at the present time, treasured up vast entailed estates,—and has often sought, by special formal notices, legitimate heirs among her trans-Atlantic descendants,—and in most cases sought in vain, in consequence of the lack of record in our vital statistics.

But at the present we are interested to examine the higher and wider aspects of our subject, as it regards the sanitary and

moral improvements of society. In nearly all the legal provisions for the registration of marriages, there is thrown around the entrance to that state a safe and wholesome restraint, in the provisions necessary for a circumstantial statistical record of the fact; which if strictly observed by the officiating party, cannot fail of preventing many ill advised and improper connections, and the unhappy results to themselves and their friends, and which are often entailed on their posterity.

But the results of registration must ever be *most* valuable in a sanitary point of view. Beginning with each individual life, or, rather, with the *antecedents* of each life, they present in one view, its moral and physiological state; and all its attendant circumstances of race, sex, age, occupation, habitation and climate—from which may often be inferred its intellectual and moral state. In another view, they present the pathology of that life,—beginning with the elemental forms of disease, and pursuing their existence through all their *own proper* attendant circumstances of relations to, and complications with each other; and also their relations to the normal state and its circumstances, which have already been referred to. And it is only from the multitude of circumstantial statistics of individual life and disease, we can deduce the great elementary laws which govern life and disease. It is to the *numerical* power of statistics is due the truthfulness of these deductions,—it is the gradually accumulating *breadth*, and *depth*, as well as the *material* of this foundation, which gives truthfulness and stability to our opinions of life and disease. It is the wide scope, the generalization of facts, in the progress of vital and mortuary statistics, which has given to opinions, which were once vague and conjectural, the practical certainty of mathematical demonstration; and leads to their application in the prevention of disease, and the extension of human life. The registration of births is a part of the strictly vital statistics, showing chiefly the normal or physiological state of a people; affording important data which are directly applicable to political economy,—and individually applicable to the special subjects of disease and death. For our present sources of information we are able to draw from the tables of nearly every country in Europe and the most populous states of our Union. As one interesting item of knowledge, we may notice, in the relative number of births, the fact of the excess in the births, of males over females; also the exact per centage of the excess in different countries, and in the different circumstances of parents; and, to some extent, the causes of these differences, and the laws which govern them. From these sources we learn, that there is, annually, in the United States, 1 birth to every 36 inhab-

itants; in this, however, a precise standard is not yet attained. In England, there is annually 1 birth in 31 inhabitants; in France, 1 in 35; in Prussia and Germany, 1 in 26. The increase by births of foreigners in the United States, is much greater than that of the natives. In the city of Boston, the excess is full 100 per cent; the data on this point are yet imperfect, but it may be safely conceded that the excess of births of foreign and mixed parentage, in our country, will average 50 per cent above the births of an equal number of American parents. The proportion of the sexes at birth, is found to observe a nearly uniform ratio in different countries; the births of males being in excess, on an average, by nearly 6 per cent, which is the per cent for England. In France and Prussia it is 7 per cent. In some of the rural districts of the United States, and especially in new settlements, it is supposed to rise to 10 per cent, while in cities, it is often found at 4 per cent. In the cities of Philadelphia and Paris, twenty-six years ago, the year following the epidemic, cholera, the births of females were in excess. By the tables of registration it is, however, shown that the preponderance in the number of males and females living, is in favor of the latter, even in early life. At the age of 5 years and upwards the number of females is in excess. During a period of thirteen years, from 1839 to 1851 inclusive, the number of births in England and Wales was, of males, 3,634,000, of females, 3,465,000—or 104,870 males to 100,000 females; while during the same period there were to every 100,000 females living, only 96,770 males.

Systematic registration has already furnished information of great, unexpected and even startling interest, in regard to the influences of locality, occupation or calling, and other circumstances of individual life. The board for the census of 1850, in collecting materials relating to the mortality of the United States, at the same time they were obtaining the usual information concerning the population, conferred an immense favor on those who are interested in the wide field of mortuary statistics. And the detailed results of their labors will undoubtedly afford more valuable facts concerning the vital statistics of this country than were ever before exhibited in like returns. These tables show that the mortality of the whole Union, for the year ending the first of June, 1850, was 320,433; the ratio being 1 to each 72 of the living population. They also show the mortality of each state and territory; and its ratio to the living. The extremes of the ratio, among the older states of the Union, are found in Vermont and Massachusetts. The annual deaths in Vermont being 1 to 100.3 of the living; in Massachusetts, 1 to 51.2 of the living. Of the newly settled states and terri-

tories, the extremes are in Oregon and Utah territories,—in Oregon, the annual deaths are 1 to 232 of the living; in Utah, 1 to 37 of the living. One, the moral, intelligent and hardy pioneers of the shores of the Columbia and Pacific,—the other, the degraded, effeminate polygamists of the Salt Lake Valley.

The rate of mortality in the whole of England, is 1 in 45—Isle of Wight, 1 in 52,—London, 1 in 39,—Manchester, 1 in 30,—Liverpool, 1 in 29. In the country districts of England the average population is 200 to the square mile,—the rate of mortality 1 in 52. In the city districts, 5,100 to the square mile,—the rate of mortality 1 in 37.

The rate of mortality in the entire state of Massachusetts in 1849, was 1 in 58,—in the city of Boston, 1 in 32.

Thus it appears that the excess of mortality in large towns is more than 40 per cent. above that in the country districts. The inhabitants of London, compared with England at large, lose 8 years of life, while those of Liverpool lose 19, and Boston 10½. Another view of the subject indicates like results. The average age at death in Liverpool, is 17½,—in Wiltshire county 35 years,—in Boston 20½,—in the country districts of Massachusetts, 31 years.

But while we must admit the fact of a wide discrepancy in the ratio of longevity in the sparsely inhabited and densely populated districts of country, we are far from adopting the melancholy view, that the difference is due solely to the relation of the two facts,—a dense population and great mortality. Although a dense population alone carries with it the elements of insalubrity, which, without great sanitary precautions, must ever be operative; yet there are other and mortal evils incident to the occupations and pursuits which congregate people in cities and towns, and modes and habits of life which have grown out of them; which, although appalling in their destructiveness of health and life, and morals, are happily not beyond our associated efforts and legislative wisdom to palliate or cure. Although our Green Mountain State is naturally and most fortunatey exempt from an excess of these blighting influences, our sister states and their populous cities, distant but a few hours from us, are yearly speaking to us lessons of serious warning, in voices of mathematical distinctness and truth. The state of Massachusetts, with a climate and topography nearly as conducive to health and long life as our own; but in consequence of a high ratio of mechanical, manufacturing and professional occupations inhabiting her cities and large towns, possesses a more dense population than any other state in the Union, sadly contrasts with us in mortuary statistics.

In the thirteenth registration report of Massachusetts, is an abstract of tables of the ten years and eight months preceding, showing the average age at death of 31,352 persons of both sexes, being over 20 years of age, and having been engaged in 149 different occupations, in the five western (or agricultural) counties, and the nine eastern (or manufacturing) counties; and showing the averages for each division of country. The same abstract also presents a summary of tables for the period of 10 y. 3 m., embracing 31,400 of the several occupations, as above, and the average age at death of each occupation. From this abstract it appears that the total average of life for all these persons is, for the five western counties, 65; for the entire state, 51.5; for the 9 eastern counties, 49.5. The average of life, as shown from the same, in the several classes of occupations is, for agriculturalists, 64 years; merchants 46; professional men, 49; public men, 49; seamen, 43. Of the mechanical and laborious occupations, the average life of shoemakers is 43; tailors 43; powder makers, 35; male operatives (manufactories,) 33; female operatives, 27; milliners 34; lawyers, 56; clergymen, 56; physicians, 55; paupers and gentlemen at large, 67.

Nothing can be more startling or more suggestive than the statistics which regard the influence of occupations on the duration of human life. The difference of from 40 to 60 per cent. in the average of life, between one large class of community and another, cannot but attract the attention of the public and of governments, to those enquiries which they evidently suggest.

Whence this wide disparity? What are the circumstances incident to mechanical employments which consign so large a portion of people to premature graves? What sanitary measures can be adopted, by persons engaged in these employments to prevent this alarming waste of life? By what means can the great mechanical and manufacturing employments be carried on, consistently with the physical well being of those engaged in them?

These questions present problems to the philanthropist and political economist, upon the solution of which depend the health, happiness and longevity of no inconsiderable part of the whole human race. It is true that *we* have hitherto dwelt securely in our mountain fastnessess, which are so inaccessible to those ills. Shall we, in return for this immunity, refuse to publish to the world the fortunate circumstances by which providence has been pleased to prolong our lives? and which by the contrast, may attract others to us, or excite their endeavors to

ameliorate their condition; besides, the "*cities of the plains*" are already invading us, increasing with every year the number of persons engaging in these branches of industry, and the wild scenery of our water-falls, wherever acccessible to the iron horse, will soon be occupied by villages of the mechanic and menufacturer. In another view, the deductions which could not fail to be drawn from registration reports of our state, will tend to give direction to our youth in selecting their location and occupations for life; to give courage and contentment to our agricultural population. They show, most conclusively, that agriculture is the normal occupation of man; the one congenial to his nature, in which he has the best guaranty of a long and healthful life. They demonstrate the fact, too, that the difference in the wages between the agriculturalist and mechanic is more apparent than real. If the farmer has less compensation for a day or a year, he has, prospectively from 40 to 60 per cent more days or years in which to earn wages. His gains for a year may be less, but the aggregate for a life may be more; besides a great desideratum—the prospect of 40 per cent. more of earthly existence.

Like the quantities which are demanded for the construction of a triangle, an accurate record of births, marriages and deaths is equally indispensable They form the three great facts, without which the sanitary condition of a people cannot be determined; and in the registration of every case of death, the attending circumstances of disease, age, sex, nativity, race, locality, &c., are necessary to elucidate the causes of death. It is this part of the system of registration which most directly claims our attention as physicians, because the information necessary for the construction of this part of the statute, must be derived entirely from the medical profession, and its execution be committed almost exclusively to their hands. It is to this source, as medical students, we must look for the knowledge which shall guide us in solving some of the problems which are yet unsolved in the laws which govern the great and fatal class of zymotic diseases. The changes which have taken place in regard to the outward and epidemic character of diseases in different sections of our country, and the progressive discoveries of their pathological habits and characters, have doubtless contributed, in a great degree, to the present unsettled opinions and practice of the profession, which are known to exist in regard to this class of diseases. This topic is adopted as one important branch of inquiry by the American Medical Association. Their commission is now directed to each state in the Union, and extended through a period of three years, in which their committees are required to obtain all

available information concerning epidemic diseases, in connection with the topography of each state respectively. Without a record of deaths, their causes and attendant circumstances, it is very obvious that information of this character must be very meagre indeed ; and the inquiries of the association must in a great measure remain unanswered. The great duty then, devolving at this time on the medical profession of Vermont, is to endeavor, through the intervention of our state government, to obtain the ability, by means of a suitable law of registration, of answering the reasonable demands of the National Association, in a manner which shall do justice at least, if not honor to ourselves and state. We are now deriving from many European states,—from Massachusetts, Connecticut, Rhode Island, New Hampshire, New York, Pennsylvania, New Jersey, Kentucky, and South Carolina, a vast amount of statistical information, bearing on this and other subjects ; common courtesy therefore, and a decent respect for our reciprocal obligations, demand nothing less than our best endeavors to respond to these inquiries.

If, then, we are not in a position to demand of our government a law of registration, as the guardians of health, we may entreat, as a boon at thair hands, what will sustain our reputation abroad, and enhance our ability in discharging the duties of our calling at home.

The registration of deaths affords statistical knowledge important to the study and treatment of every class and species of disease. A knowledge of the causes and circumstances which attend and occasion the fatality of diseases, must be first comprehended, in order to excite and direct the proper efforts which are necessary for their alleviation or abatement. It is the special province of physicians to understand the nature of diseases, in order to their judicious and successful treatment, and it is no less plainly the province of the community and of governments, to understand the many attendant circumstances of disease, which are often more fatal in their consequences than the nature of the malady itself, in order to discharge a duty, no less binding, to mitigate or abate them. And we have abundant precedents, in which the well directed and faithful applicatien of sanitary resources have contributed more to the prevention of death, by preventing disease and mitigating its circumstances, than the best efforts of the physicians without them. This is most evident in regard to contagious diseases ; in the municipal and police regulations of vaccination and quarantine, and in abating nuisances in manufactories, promoting cleanliness and social and moral comforts in the sinks of vice and filth, in places of moral and physical depravity in large

cities. Millions have been rescued from that loathsome and mortal disease, the small pox, by the simple proventive means of vaccination. This, however, requires the hand of civil power, as well as the guidance of professional knowledge to secure entire immunity to the people, as is evident from the contrast of deaths by small pox in our own country, where vaccination is optional with families, with some of European states in which it is compulsory and universal.

Under the vastly increasing light which is now shed upon the dark habitation of disease and death, there are revelations which cannot return again to the places of their concealment, or unmitigated abide the gaze of the true philanthropist or statesman. It is shown in unmistakable and rugged outlines that large numbers of valuable lives are sacrificed annually, which, with proper sanitary improvements, which could readily be suggested and made, might be saved.

Some of our states, and several European nations, have entered manfully on the work of reform. Amidst all the changes of revolutionary France; under the star of Napoleon, (and it was the first which appeared in the dark horizon, and which, while the code Napoleon remains, is a star which will never go down,) the government of France is unceasingly contributing her treasures and talent in elevating the physical condition of her people. With the directing light of her vital statistics, and the protecting hand of parliament, England is daily improving the condition of her citizens. In many localities measures are greatly advanced which elevate and save life. Model lodging houses have had more than their anticipated effect: they have reduced the mortality more than one-half among the population occupying them, and utterly exterminated typhus fever from their occupants. Says a foreign writer: "It has been proved in the report of the General Board of Health, that every efficient sanitary improvement has been followed, as directly as cause and effect, by corresponding decrease of sickness and mortality;—there is no exception to the rule.

In addition to the actual waste of life, there is much *avoidable* sickness, and enervation of physical energy, the amount of which cannot be estimated. A few years ago, it was estimated by the late venerable Dr. Warner, of Boston, that the Temperance Reform had augmented the physical powers of the state one-sixth. If a reformatory change in the habits of the people, pertaining to a single article of beverage, is capable of affecting such a valuable result, (and no true physiologist will hesitate to admit it,) who can calculate the advantages upon the public, especially in our densely peopled villages, if a complete system of health measures, such as is the province of legislators to require, and in the power of the people to adopt.

Such, however, we know cannot be expected in our own state, until the initiatory step is taken, and the public are made acquainted with the lessons which the system of registration is teaching, in plain and comprehensive language. Wise lessons, fortunately, we may borrow from our neighboring and the trans-Atlantic states, who are our pioneers in registration and laws upon the subject of public health, and are furnishing annually a mass of information on the subject, so extensive and systematic as to demonstrate, with almost mathematical certainty, the truths which they claim to exhibit.

Although the state of Vermont is at present, in a great degree, exempt from the attendant circumstances which so often impart a fatal character to disease among a dense population, yet we cannot look forward with security from our mountain fastnesses;—these fatal causes are already within our limits, and gradually infesting our villages and manufactories. Disease and death, aside from preventable causes, comes to us as it comes to all. Our mountains and valleys are not inaccessible to the legion of epidemics; they still invade us, and leave sections of our state in mourning.

In conclusion, gentlemen, I have to express my regret, that neither my sources of information, my ability, or the compass of this annual address, allow me to do justice to this great subject. I am encouraged, however, in the belief that in what I have offered, I have only reciprocated the enlightened views of our profession; and that, from the facts presented, their better judgment will make such inductions as shall lead us to the harmonious desire and endeavor to procure in our commonwealth a boon which is enjoyed by our sister states; and when it shall have been attained, to co-operate with the civil authorities as almoners of its benefits to the people, who favor us by their confidence in committing to our trust their healths and lives.

In regard to the magnitude of this subject, its fitness as a subject of legislation,—and to command the attention of a whole people, who can doubt? In the language of an able advocate and benefactor of the cause, "we do not fear the charge of exaggeration, when we claim for the sanitary question, the right to be regarded as *the* great question of the day. Look at it as a question of humanity, and it will not suffer in comparison with the highest efforts of the philanthropist; regard it as a great *act of justice*, and here, too, you will acknowledge that it prefers peculiar claims to consideration; or, measure it by the rule of economy, and I hesitate not to affirm that it stands without a rival; or, view it in its moral relations, and we know not whether the great question of Education will take rank before it."